

**REMARKS/ARGUMENTS**

Claims 40-51 were pending in the present application. The present response amends claims 40-48 and 50, and adds new claim 52, leaving pending in the present application claims 40-52. Reconsideration of the existing claims and consideration of the newly presented claim is respectfully requested.

**I. Rejection under 35 U.S.C. §112**

Claims 40-51 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 40-51 have been amended for purposes of clarity, and as such should be sufficiently definite. Applicants therefore respectfully request that the rejection with respect to claims 40-51 be withdrawn.

**II. Rejection under 35 U.S.C. §103***a. Hart (US 6,192,061)*

Claims 40-51 of the present application as amended require “a pair of electrodes including a first electrode extending along a first elongated surface of the waveguide structure and a second electrode extending along a second elongated surface of the waveguide structure, the first elongated surface being opposite and parallel to the second elongated surface, each of said first and second electrodes being divided into spaced apart first and second electrode portions,” where each of the spaced apart first and second electrode portions of said first electrode are electrically connectable to an RF power supply for applying an RF potential across said gain medium. Claims 40-51 also require “a metal shield located between said spaced apart first and second portions of said first and second electrodes,” the metal shield being positioned transverse, or orthogonal, to said first and second elongated surfaces so as to prevent RF coupling between said spaced apart first and second portions of said first and second electrodes.

*Hart* does not teach or suggest such limitations. The embodiment of Figure 8 cited in the Office Action is drawn to “an improved clamping arrangement” in a system with two metal electrodes having a ceramic waveguide disposed therebetween (col. 5, lines 7-31). *Hart* does not teach or suggest using a pair of electrodes, each electrode divided into spaced apart first and second portions, or an orthogonal metal shield positioned between the portions in order to

prevent RF coupling. *Hart* does not provide any motivation to split electrodes into portions, or suggest steps necessary for split electrodes to properly function in the *Hart* system.

The Examiner states that it “would have been obvious to one having ordinary skill in the art at the time the invention was made to evenly divide the electrodes to enhance the laser operational capabilities in very high continuous duty applications.” Applicants respectfully point out that no support or evidence is given for such a conclusion. Further, Applicants respectfully submit that there are problems as discussed in the present application, including electrode portions being out of phase, arcing, and RF coupling, that could result from simply splitting electrodes, such that the electrodes could not have simply been split with any likelihood of success.

Further, the use of spaced apart electrode portions separated by an RF shield is a not mere duplication of essential working parts of *Hart*. Applicants are not simply adding electrodes to the system of *Hart*, and *Hart* does not disclose spaced apart electrode pairs or orthogonal metal shields used to RF decouple spaced apart portions of the same electrode.

For reasons including those discussed above, Applicants respectfully request that the rejection with respect to claims 40-51 be withdrawn.

*b. Vitruk (US 5,953,360)*

As discussed above, claims 40-51 of the present application require “a pair of electrodes including a first electrode extending along a first elongated surface of the waveguide structure and a second electrode extending along a second elongated surface of the waveguide structure, the first elongated surface being opposite and parallel to the second elongated surface, each of said first and second electrodes being divided into spaced apart first and second electrode portions,” where each of the spaced apart first and second electrode portions of said first electrode are electrically connectable to an RF power supply for applying an RF potential across said gain medium. Claims 40-51 also require “a metal shield located between said spaced apart first and second portions of said first and second electrodes,” the metal shield being positioned transverse, or orthogonal, to said first and second elongated surfaces so as to prevent RF coupling between said spaced apart first and second portions of said first and second electrodes.

*Vitruk* does not teach or suggest such limitations. In one embodiment (Fig. 4), *Vitruk* teaches “four electrodes 102, 104, 106, 108...defining a rectangular, longitudinally extending

laser bore” without a waveguide (col. 4, lines 21-30). None of these electrodes have first and second, spaced apart portions extending along a single elongated surface of the waveguide structure, or a metal RF shield separating the portions. In another embodiment (Fig. 7), *Vitruk* has upper and lower electrodes “forming a Z-folded laser bore” (col. 6, lines 7-32). Again, *Vitruk* does not teach or suggest electrodes having first and second, spaced apart portions extending along a single elongated surface of a waveguide structure or an orthogonal metal shield between the portions. Further, there is no motivation in *Vitruk* to split the electrodes, or any suggestion that the electrodes could be split with any likelihood of success. As there is no suggestion of splitting the electrodes, there also can be no motivation to use an RF shield between the portions to prevent RF coupling between the portions. Further, dividing first and second electrodes into spaced apart portions separated by an orthogonal RF shield is not a mere duplication of elements present in *Vitruk*. As such, Applicants respectfully submit that claims 40-51 of the present application are not rendered obvious by *Vitruk*, and respectfully request that the rejection with respect to claims 40-51 be withdrawn.

### **III. Amendment to the Claims**

Unless otherwise specified, amendments to the claims are made for purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof. The amendments are supported by the specification and do not add new matter to the specification.

### **IV. Newly Presented Claim**

Newly presented claim 52 is supported by the specification as filed, such as for example at page 46, lines 12-15, and as such does not add new matter to the application. Applicants respectfully request consideration of the newly presented claim.

### **V. Conclusion**

In view of the above, it is respectfully submitted that the application is now in condition for allowance. Reconsideration of the pending claims and a notice of allowance is respectfully requested.

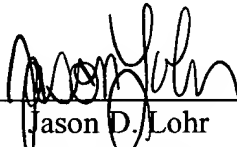
The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed, or which should have been filed herewith (or with any paper hereafter

filed in this application by this firm) to our Deposit Account No. 50-1703, under Order No. COHO-4630. **A duplicate copy of the transmittal cover sheet attached to this Response to Office Action Mailed August 1, 2003, is provided herewith.**

Respectfully submitted,

STALLMAN & POLLOCK LLP

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